



## Tinni rice (*Oryza rufipogon* Griff.) production: An integrated sociocultural agroecosystem in eastern Uttar Pradesh of India

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### Abstract:

This study reports how Traditional Ecological Knowledge (TEK) and informal cultural institutions have conserved key varieties of the wildgrowing rice, 'tinni' (red rice, or brownbeard rice, *Oryza rufipogon* Griff.), within the Bhar community of eastern Uttar Pradesh, India. The study was conducted, using conventional and participatory methods, in 10 purposively selected Bhar villages. Two distinct varieties of tinni ('tinni patali' and 'tinni moti') with differing habitats and phenotypic characters were identified. Seven microecosystems (Kari, Badaila, Chammo, Karmol, Bhainsiki, Bhainsala and Khodailia) were found to support these varieties in differing proportions. Tinni rice can withstand more extreme weather conditions (the highest as well as lowest temperatures and rainfall regimes) than the 'genetically improved' varieties of rice (*Oryza sativa* L.) grown in the region. Both tinni varieties are important bioresources for the Bhar's subsistence livelihoods, and they use distinctive conservation approaches in their maintenance. Bhar women are the main custodians of tinni rice agrobiodiversity, conserving tinni through an institution called Sajha. Democratic decision-making at meetings organized by village elders determines the market price of the tinni varieties. Overall, the indigenous institutions and women's participation seem to have provided safeguards from excessive exploitation of tinni rice varieties. The maintenance of tinni through cultural knowledge and institutions serves as an example of the importance of locally maintained crop varieties in contributing to people's resilience and food security in times of rapid social and environmental change.

**Source:** <http://dx.doi.org/10.1007/s00267-011-9755-8>

### Resource Description

#### Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

#### Communication Audience:

audience to whom the resource is directed

Public

#### Exposure :

weather or climate related pathway by which climate change affects health

# Climate Change and Human Health Literature Portal

Food/Water Security

**Food/Water Security:** Agricultural Productivity

**Geographic Feature:** ☒

resource focuses on specific type of geography

None or Unspecified

**Geographic Location:** ☒

resource focuses on specific location

Non-United States

**Non-United States:** Asia

**Asian Region/Country:** India

**Health Co-Benefit/Co-Harm (Adaption/Mitigation):** ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

**Health Impact:** ☒

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

**Mitigation/Adaptation:** ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

**Population of Concern:** A focus of content

**Population of Concern:** ☒

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

**Resource Type:** ☒

format or standard characteristic of resource

Research Article

**Resilience:** ☒

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

**Timescale:** ☒



time period studied

Time Scale Unspecified